In compliance with:

**CEN ISO 13849-1:2015**

Safety of machinery, safety related parts of control systems Part 1: general principles of design

**MTTFd FSAV Series**

B10d rating based on the calculated assumptions below is:-

= 1,450,000 cycles


≡ Performance Level e (CEN ISO 13849-1. Table 2)
≡ Safety Integrity Level 3 (CEN ISO 13849-1. Table 3)
≡ MTTFd denotation HIGH (CEN ISO 13849-1. Table 4)

\[ tcycle, \text{mean time between two successive cycles} \]
\[ hop, \text{mean operation in hours per day} \]
\[ dop, \text{mean operation in days per year} \]
\[ nop = \frac{dop \times hop \times 3600}{tcycle} \]
\[ \text{B10d no. cycles until 10% of components fail dangerously} = 1,450,000 \text{ cycles} \]
\[ \text{MTTFd} = \frac{B10d}{0.1 \times nop} \]
\[ \lambda d = \frac{0.1 \times nop}{(B10d \times 220 \times 8)} \]

3600 seconds (1 cycle per hour)

1 shift x 8 hours.

220 days.

1760 mean annual operations

8,238.64 years

6.90 E-08 per operating hour

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